

ABSTRACT OF THE DISCLOSURE

A method and apparatus for training and using a pattern recognition model are provided. Under the invention, additive noise that matches noise expected in a test signal is included in a training signal. The noisy training signal is passed through one or more noise reduction techniques to produce pseudo-clean training data. The pseudo-clean training data is used to train the pattern recognition model. When the test signal is received, it is passed through the same noise reduction techniques used on the noisy training signal. This produces pseudo-clean test data, which is applied to the pattern recognition model. Under one embodiment, sets of training data are produced with each set containing a different type of noise.